

OLDEST BEE PAPER
IN AMERICA

ESTABLISHED
IN 1861

THE WEEKLY BEE JOURNAL

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN
1861.

Chicago, Ill., October 1, 1884.

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THE AMERICAN
BEE JOURNAL

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THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

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TO CORRESPONDENTS.

The Subscription Price of the Weekly BEE JOURNAL is \$2.00 a year; and of the Monthly, 50 cents a year in advance. New Subscriptions can begin at any time.

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Sample Copies of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

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THE AMERICAN
BEE JOURNAL

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For either the Weekly or Monthly Editions.

A line of this type will contain about 7 words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, 50 cents per line.

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THOMAS G. NEWMAN,

925 West Madison Street., Chicago, Ill.

TO CORRESPONDENTS.

Advertisements for the next Weekly BEE JOURNAL must reach this office by the Saturday of the previous week.

Books for Bee-Keepers.—For prices and descriptions of bee-books, see the second page of this paper.

All Papers are Stopped at the expiration of the time paid for, unless requested to be continued.

When writing to this office on Business, correspondents must not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either part of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They both may be sent in one envelope, but on separate pieces of paper.

Always give the name of the Post-Office to which your paper is addressed. Your name cannot be found on our List, unless this is done.

Emerson Binders, made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents each. They cannot be sent by mail to Canada.

To Canadians.—We take Canadian money for subscription or books; and Canadian postage stamps may be sent for fractions of a dollar.

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To Australia—Weekly, \$1; Monthly, 20 cents.
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E. L. ARMSTRONG, Jerseyville, Ill.,
ARTHUR TODD, Germantown, Philadelphia, Pa.,
E. KRETCHMER, Coburg, Iowa,
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and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1888.

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Prof. Cook in his valuable Manual of the Apiary, states that "Mr. Bingham was the first to improve the old Quinby smoker by establishing a direct draft." Five years of persistent effort has demonstrated that no one but Bingham has been able to improve a Bingham smoker. Hundreds of Bingham smokers have been in use five years, and are yet in working order. They burn lots of blocks and chips and stuff, and make lots of smoke and comfort, and have no dampers or match-box attachments, as they never go out or fail to blow smoke up or down or sideways, much or little, swift or slow, just as you please, any or all the time; top up or down, they always go!

Bee-keepers will save money and vexation by buying genuine Bingham smokers and Bingham & Hetherington Uncapping-Knives first. We neither make nor handle any other supplies; but of these we are the original inventors, and only legal makers, and have had over 45,000 in use from one to five years, and receiving but one letter of complaint.

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Little Wonder smoker 1 3/4 " . .	65
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THOMAS G. NEWMAN,
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On dozen or half-dozen lots of one kind, we allow 25 per cent. discount, and prepay postage. Special rates on larger quantities, given upon application.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by THOMAS G. NEWMAN.—It is "fully up with the times," in all the various improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. It embraces the following subjects: Ancient History of Bees and Honey—Locating an Apiary—Transferring—Feeding—Swarming—Dividing—Extracting—Queen Rearing—Introducing Queens—Italianizing—Bee Pasturage—A Necessity—Quieting and Handling Bees—The Management of Bees and Honey at Fairs—Marketing Honey, etc. 230 profusely-illustrated pages. Price, bound in cloth, \$1.00; 2 copies for \$1.80; 3 copies for \$2.55; 5 for \$4.00; 10 for \$7.50. Paper covers, 75 cents; 2 copies for \$1.40; 3 copies for \$2.00; 5 for \$3.00; 10 for \$5.00.

The Apiary Register, by THOMAS G. NEWMAN.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, \$1.00; for 100 colonies, \$1.25; for 200 colonies, \$1.50.

Honey as Food and Medicine, by THOMAS G. NEWMAN.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the English or German edition, 5 cents—one dozen, 40 cents—100 for \$2.50—500 for \$10.00—1,000 for \$15.00.—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

Bee-Keepers' Convention Hand Book, by THOMAS G. NEWMAN.—It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for discussion—List of Premium for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, 50 cents.

Why Eat Honey? by THOMAS G. NEWMAN.—This Leaflet is intended for distribution in the Bee-Keeper's own locality. In order to create a Local Market. Price, 50 cents per 100; 500 copies for \$2.25; 1,000 copies for \$4.00. When 200 or more are ordered at one time, we will print the honey-producer's name and address FREE, at the bottom.

Preparation of Honey for the Market, including the production and care of both Comb and Extracted Honey, and Instructions on the Exhibition of Bees and Honey at Fairs, etc., by THOMAS G. NEWMAN. This is a chapter from "Bees and Honey." Price, 10c.

Swarming, Dividing and Feeding Bees,—Hints to Beginners, by THOMAS G. NEWMAN. A chapter from "Bees and Honey." Price 5c.

Bee Pasturage a Necessity, by THOMAS G. NEWMAN.—Progressive views on this important subject; suggesting what and how to plant.—A chapter from "Bees and Honey." 26 engravings. Price, 10c.

Bees in Winter, by THOMAS G. NEWMAN.—Describing Chaff-packing, Cellars and Bee-Houses. A chapter from "Bees and Honey." Price 5c.

Bienen Kultur, by THOMAS G. NEWMAN.—In the German language. Price, in paper covers, 40 cents, or \$3 per doz.

Bee-Keepers' Guide, or Manual of the Apiary, by PROF. A. J. COOK.—It is elegantly illustrated, and fully up with the times on every subject that interests the bee-keeper. It is not only instructive, but interesting and thoroughly practical. It comprises a full delineation of the anatomy and physiology of Bees. Price, \$1.25.

Quinby's New Bee-Keeping, by L. C. ROOT.—Its style is plain and forcible, making its readers realize the fact that the author is master of the subject. Price, \$1.50.

A B C of Bee-Culture, by A. I. ROOT.—Embraces everything pertaining to the care of the Honey-Bee, and is valuable to the more advanced bee-keeper, as well as the beginner. Cloth, \$1.25; paper, \$1.

Blessed Bees, by JOHN ALLEN.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Price, 75c.

The Hive and Honey-Bee, by REV. L. L. LANGSTROTH.—This is the work of a master, and will always remain a standard. Price, \$2.00.

Dzierzon's Rational Bee-Keeping.—A translation of the master-piece of that most celebrated German authority. Price, bound in cloth, \$2.00; in paper covers, \$1.50.

Queen-Rearing, by HENRY ALLEY.—A full and detailed account of 23 years experience in rearing Queen Bees. The cheapest, easiest and best way of rearing. Price, \$1.

Bee-Keepers' Text Book, by A. J. KING.—A new edition, revised and enlarged. Price, \$1.00, bound in cloth.

Extracted Honey; Harvesting, Handling and Marketing.—By CHAS. DADANT & SON.—Details their management. Price, 15c.

Practical Hints to Bee-Keepers, by CHAS. F. MUTH.—Gives his views on the management of bees. Price, 10c.

Dzierzon Theory.—The fundamental principles of Dzierzon's system of apiculture as set forth by Berlepsch. It was translated by the late Samuel Wagner. Price, 15c.

Dictionary of Practical Apiculture, by PROF. JOHN PHIN.—This gives the correct meaning of nearly 500 apicultural terms. Price, bound in cloth, 50c.

The Hive I Use, by G. M. DOOLITTLE.—Details his management of bees. Price 5c.

Foul Brood, by A. R. KOHNKE.—Its origin and cure. Price, 25c.

Moore's Universal Assistant, and Complete Mechanic.—Contains over 1,000,000 industrial facts, calculations, processes, trade secrets, legal items, business forms, etc. Price, \$2.50.

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, 25c., in either English or German.

Food Adulteration.—What we eat and should not eat. This book should be in every family. Price, 50c.

Scribner's Lumber and Log Book.—Gives measurement of all kinds of lumber, logs and planks; wages, rent, etc. Price, 35c.

Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, 40c.

Hand-Book of Health, by Dr. Foote.—Rules for eating, drinking, sleeping, bathing, working, dressing, etc. Price, 25c.

Emerson Binders, made especially for the BEE JOURNAL, and lettered in gold on the back. 75c. for the Weekly; or for the Monthly, 50c. They cannot be sent by mail to Canada.

Constitution and By-Laws, for local Associations, \$2 per 100. The name of the Association printed in the blanks 50c. extra.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, 10c. each, or \$8 per 100.

Poulterer's Guide, for treating diseases of Poultry, etc., by C. J. WARD. Price 25c.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX.

CHICAGO, ILL., OCTOBER 1, 1884.

No. 40.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Death of Mr. D. S. Given.

Mr. D. S. Given, the inventor of the Given Foundation Press, died in Los Angeles, Cal., on July 10, where he went in November 1881, hoping to regain his health. He was born in Muskingum County, O., Dec. 22, 1843, and removed to Illinois in 1864. In 1866 and 1867 he was secretary of the Freedman's Bureau. In 1868 he married Miss Hill, of Pennsylvania, who has survived him; they had one child. His partner in business is Mr. J. R. Caldwell, who, in company with the widow, will hereafter carry on the business, as will be seen by a notice on page 638.

To Canadian subscribers let us say that we have made arrangements so that we can supply the *Farmer's Advocate* of London, Ont., and the *Monthly BEE JOURNAL* for one year at \$1.25 for the two. This is a rare chance to obtain two good papers for about the price of one.

Urge the store-keeper to whom you sell your honey to keep it in view. People seldom go to a store expressly to buy honey; they are induced to do so by seeing it on the counter or shelves. The neater and nicer it looks, the quicker and better it will sell.—*Texas Ranch.*

Convention at Chicago, Oct. 15. It promises to be a very interesting re-union of the bee-men of the West.

The Northern Michigan Bee-Keepers will hold a Convention at Greenville, on Oct. 6 and 7. The notice did not reach this office, until the forms were all made up. We squeeze in this item.

Bee and Honey Show in Indiana.

The Porter County, Ind., *Vidette*, gives the following items about the display of honey at the Fair:

It is only a few years since bee-culture has taken a prominent part in the products of the land called Indiana. The old-fashioned bee-hunting, where a man's trowsers was in constant danger in climbing in search of honey, with a fair chance of meeting Mr. Bruin to dispute the way, has been done away with, and but an occasional land-mark is found of yestern times. Porter county, as well as portions of the State, are progressive; and among the exhibitors at the Fair we notice T. S. Bull & Sons, who have a fine exhibit of honey from their apiary, five miles north of the city. They have 200 colonies of bees, and the products of the year are 1,200 pounds of comb, and 10,000 pounds of extracted honey.

Another exhibitor in the bee-department, is Dwight Furness, of Furnessville. He has a large number of colonies, and his specialty is comb honey. He has a fine exhibit, and a new idea he shows is in pound packages enclosed in a neat paper basket which makes a neat package for dealers to handle.

MARRIED.—In Cleveland, Ohio, Sept. 18, 1884, by the Rev. William Gaston, pastor of the North Presbyterian Church, at his residence 1083 Superior street, Alfred J. Fisher and Miss Lora M. Kinsey, both of East Liverpool, Ohio.

The BEE JOURNAL acknowledges the receipt of a box of wedding cake, and wishes the happy pair all the joy they wish themselves. Mr. Fisher has been a correspondent and subscriber to the BEE JOURNAL for years, and is well-known to our readers. Last year he argued, on page 108, that "more honey would be stored without than with separators." Acting upon this idea himself, he has concluded to allow nothing to separate him from his Lora, and both may now be expected to fill their hive [home] with honey [sweetness] unalloyed and unadulterated—beginning with the "honey-moon," and ending with life's journey.

Bees at the Iowa State Fair.

The *Times*, a paper published for the Fair, has the following items relative to the Bee and Honey exhibit of the Rev. O. Clute:

A very interesting display was that of Rev. O. Clute, of Iowa City, consisting of fine extracted honey, and also of numerous glazed cases showing different kinds of bees.

Hon. Thomas B. Wales, came from Iowa City with a magnificent herd of thorough-bred Holstein cattle, his party consisting of himself, daughter and son, the Misses Nellie Younkin and Edith Shipley, of Iowa City, and the Rev. O. Clute and his two assistants in the apiary display. This happy family had at their disposal two large wall-tents, subdivided into reception room, dining hall, boudoirs, sleeping apartments and kitchen, and lived *al fresco* in most luxurious style. A *Times* artist has attempted the portrayal of their canvas home. That the young ladies can prepare an excellent picnic dinner, another *Times* representative will testify.

The engraving shows the family tent to good advantage. They must have had an enjoyable time.

Bees Gathering Honey.

The Kansas *Bee-Keeper* gives the following rules to indicate to novices when bees are gathering honey from the flowers:

In giving instructions for general management in the apiary, the expression, "when the bees are gathering honey from the flowers," is often used, and the question is almost as often asked by the novice in bee-culture, "How am I to know when my bees are gathering honey from the fields?" The experienced bee-keeper judges of this by the action of the bees in and around the hive. The novices may judge with equal certainty by the following test: place a little honey or sugar syrup in the open air, if it is quickly found and carried away by the bees, we may safely judge there is no nectar being secreted in the flowers; but if it remains untouched a greater part of the day, we may know that at such times there is a plentiful flow of honey from the flowers, which engages the attention of the bees.

Death of Mr. John Madden.

The Davenport, Iowa, Daily Gazette of Sept. 20, contains the following notice of the death of one of the prominent bee-keepers of Iowa:

On Sept. 19, 1884, occurred the sudden death of Mr. John Madden, in Winfield township, near Long Grove, Iowa.

The news of Mr. Madden's death soon spread through the country, carrying sadness with it; for having lived here for 30 years, he was well-known, and had the respect and confidence of all his friends.

At about 6 o'clock on Thursday evening, the deceased was driving with a single horse and buggy from Donahue to Long Grove, when the horse becoming frightened at some children trying to get a bed-tick over a fence, ran westward until it came to the house of Henry Madden, brother to the deceased, where it entered the yard. During the run Mr. Madden had been thrown from the buggy. Mr. Henry Madden hurried back along the road, and at its side found his brother lying dead; his whip in his hands, and the lap-robe wrapped about his legs.

There was no evidence of intended violence, but death had apparently resulted from concussion of the brain. The jury returned a verdict "that the deceased came to his death by being thrown from his wagon, his horse having been frightened."

Mr. John Madden was born in Wighton, England, on Aug. 8, 1817, and came to the United States in 1850, landing at New Orleans and ascending the river to Davenport. He purchased land in Winfield township, out of which he soon made a farm, and has occupied it as his home ever since.

Mr. Madden has always been an enterprising citizen, with a heart full of kindness, and possessing good judgment in all business transactions. He has for a great many terms of the District Court been foreman of the grand jury. He always took great interest in public affairs, and was a member of the Scott County Agricultural Society from its foundation. He leaves a wife and eight grown-up children.

The officers of the Eastern Iowa and Western Illinois Bee-Keepers' Association have sent us the following for publication:

Mr. Madden was a successful and progressive apiarist, and one of the first to help organize what is now known as the Eastern Iowa and Western Illinois Bee-Keepers Association, and until the time of his death, he was always an active member of this Association, and many who attended the annual meetings of this Association, and there made his acquaintance, will receive with profound sorrow the news of his untimely death. The esteem in which the deceased was held, was demonstrated by the fact that 225 vehicles (10 of which held bee-keepers) followed the remains to its last resting place. The members

of this Association express their heartfelt sympathies with Mrs. Madden in her great bereavement.

WM. GOOS, Sec.

L. V. MCCAGG, Pres.

Transferring Bees at a Fair.

A Philadelphia paper gives the following account of public manipulations with bees in the bee-tent at the Fair in that city:

The bee-tent at the Fair was the scene of a remarkable entertainment yesterday afternoon. Mr. Arthur Todd gave an exhibition of the method in which bees are manipulated. Quite unprotected by head-net or gloves, he opened a box-hive full of bees, took out the comb and transferred it to a new hive. He carefully sliced off the coverings of the cells, and, placing the comb in the extractor, emptied them of their sweet contents. He sought among the crowded colony for the queen-bee, and having found her, showed her to his audience, who were safely standing outside his gauze tent, then deposited her in a little wire cage made expressly for her, introduced her in a polite manner to her friends, and put her into the handsomely furnished hive, which he had prepared for her reception.

Mr. Todd handled the little insects as if he were ignorant of the fact that they all carried a very ugly weapon, and he appeared to be on terms of affection with them all. They crawled over the bald part of his head, swarmed on his hands and arms, and got caught in his beard, but they seemed to think it was all play, and he appeared to enjoy the fun. The astonished visitors looked on with mute admiration as he lifted a frame of comb from the box-hive and showed them the eggs in some cells, the honey in others, and again others covered with the curious waxy substance the bees gather.

In the gauze tent with Mr. Todd were Mrs. Louisa Thomas, of Tacony, one of the earliest practical bee-keepers in this country; Mrs. Foote, of New Haven; Dr. Townsend, President of the Philadelphia Bee-Keepers' Association; John Shallcross, of Frankford, and John Pyewell, an enthusiastic bee-keeper from Bridgeport, Pa.

"Bee-keeping," said Mrs. Thomas, "is one of the most absorbing employments. Bee-keepers become so interested in their work that any trouble that may attach to the care of an apiary is completely overlooked in the pleasure it gives. This exhibition is, without exception, the very best I have ever seen, both as regards the bees and the honey. The whole work of transferring a colony of bees from one hive to another only occupied 40 minutes."

Arthur Todd has been awarded six prizes for his honey and bees, and will receive a special award for his clever manipulation of his busy little favorites.

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL, }
Monday, 10 a. m., Sept. 20, 1884 }

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY.—Nothing stirring in the market for the last few weeks. The approach of cooler weather is expected to impart more life to the trade. Comb honey sells at 16c. in the jobbing way, and brings 14½c. on arrival for choice. Offerings exceed the demand. Extracted honey has commenced to accumulate, but demand is fair for small packages for table-use, as well as for darker grades in barrels. It brings 8½c. on arrival.

BEESWAX.—Is dull at 26½c. on arrival.

C. F. MUTH, Freeman & Central Ave.

NEW YORK.

HONEY.—As we have already commenced receiving consignments of this year's crop of honey, we feel safe in making the following quotations: Fancy white comb, 1-lb., 12½c.; 2-lb., 16½c.; fair to good, 1 and 2-lb., 14½c.; fancy buckwheat, 1-lb., 12½c.; 2-lb., 11½c.; ordinary grades of dark, 1 and 2-lb., 11½c. Extracted white choice, in kegs or small barrels, 8½c.; buckwheat, 6½c.; 7c. BEESWAX.—Prime yellow, 30½c.

MCCAUL & HILBRETH, 34 Hudson St.

BOSTON.

HONEY.—We quote best white in 1-lb. sections, 18½c.; 2-lb., 16½c. Extracted, 8½c. Unglassed sections sell best.

BEESWAX.—35c.

BLAKE & RIPLEY, 57 Chatham Street.

CHICAGO.

HONEY.—Comb honey has been taken with freedom by the trade this week, but 15½c. is the best price obtainable for a fancy article of comb honey in frames. Some lots bring from 14 to 15c. when in good order. Stock of comb honey is not large at present. Extracted, 7½c. for new.

BEESWAX.—For fair to yellow, 28½c.

H. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY.—No movement of consequence. Stocks are of fair proportions, but are in some instances limited to figures not obtainable. Choice extracted is in demand at the quotations below noted. White to extra white comb, 9½c.; dark to good, 7½c.; extracted, choice to extra white, 4½c.; dark and candied, 4c.

BEESWAX.—Wholesale, 25½c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY.—Steady; demand and supply both small. Comb, 12½c. per lb., and strained and extracted 8½c.

BEESWAX.—Firm at 32½c. for choice.

W. T. ANDERSON & Co., 104 N. 3d Street.

CLEVELAND.

HONEY.—The honey market seems to be improving, so that there is a larger demand. Best 1-lb. sections were sold in quantity at 16c.; in a small way 17c. is occasionally obtained, but 16c. would be the more reliable quotation; 2-lb., best white, 14½c.; second quality slow at 10½c. Extracted slow at 8½c.

BEESWAX.—30c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY.—We quote comb honey in 2-lb. sections, 15c.; extracted, 7½c.

GEO. W. MEADE & Co., 213 Market.

KANSAS CITY.

HONEY.—There is no change to report. The demand is good with liberal receipts and prices at about last quotations, with some concessions in round lots. Choice Eastern comb, ½-lb. sections, 18c.; 1-lb., 16c.; 2-lb., 15c. California comb, 2-lb. frames, 15c. Lower grades move slowly, at 2 or 3c. less. Extracted, 6½c. according to quality. We could use a few thousand pounds of choice white clover extracted, in barrels, and will be pleased to receive consignments or will purchase outright as much as 5,000 lbs. at a reasonable price.

BEESWAX.—None in the market.

CLEMONS, CLOON & Co.
Successors to Jerome Twichell.

Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again." The time for reading up will soon be here, and in anticipation of this, we now have a very large stock of books on hand, and can fill orders for them in any quantity, on receipt of orders.

CORRESPONDENCE

For the American Bee Journal.

Doolittle's Report for 1884.

G. M. DOOLITTLE.

Not long ago I received a letter from one of our most prominent bee-keepers saying that his yield of honey was very light. "In fact," said he, "it is so light that I shall not report at all." If he had added that he had never reported except once, that being a few years ago when he had secured almost the largest yield of honey on record, he would have given a truthful statement. This bee-keeper is not an exception by any means, for we have many others who never report except when they can report a very large production. In this way the showing in our bee-papers and elsewhere is very largely on the bright side of bee-keeping; for these large reports are copied into nearly every paper in the United States, and perhaps of the world, as was the large report above referred to.

Our bee-keepers have been severely criticised by selfish apiarists for their giving these large reports, who argue that such reports are given by the editors for the purpose of enticing others to enter the ranks of bee-culture, thereby giving these papers a larger patronage, and enabling the editors to sell a larger bill of supplies; which thing is claimed to be for the interest of the supply dealer, and against the producer's interest. It is not my desire, at this time, to argue this point; for, be that as it may, I claim that it is the bee-keepers who are to blame (if there is any blame) for only this bright side of bee-keeping being given. If every bee-keeper should give a report, only in years when they secured but a small crop, or none at all, the thing would be reversed; or if, as some claim, that the editors of the different papers would not publish reverses, then no reports at all would be given, till these selfish fellows could be accommodated by a decrease regarding those who are entering the business.

But no; these same men who censure will rush into print with a large report, if they have such, while if the yield is light, no report will be given, as the person alluded to at the beginning of this article, decided to do. Now, bee-keepers, either report your failures or else be consistent enough to not blame the bee-papers for publishing large reports when you give them only such to publish. My idea has been that, if all would faithfully report, each year, that we should know about the truth regarding the profitability of apiculture, and for this reason I have not failed in giving my report for the past 11 years, and shall now report for 1884.

I must say it is, by far, the smallest yield of honey that I received since

1869, which was the first year of my experience with bees. On page 356, I gave you a report of my loss of bees during the winter, which, together with the sale of bees that I had previously contracted, reduced my number (80) in the fall to 40 at the time spring was fairly opened. Fourteen of the weakest of these were set apart for queen-rearing, which left 26 to be worked for honey. As I had more orders for queens than I could fill with the nuclei made from the 14 weaker colonies, I had to draw quite largely of bees and brood from the 26 set apart for honey, to form more nuclei; so had there been an early supply of honey, this would have been a disadvantage; but as there was not, the loss from this source would not exceed 100 pounds.

The first honey obtained was from the golden willow, which was so meagre that it was consumed for brood-rearing nearly as fast as obtained. As there was no hard-male blossoms, and my bees were short of stores, I looked forward to the apple-bloom with much interest, hoping that it would yield enough honey to carry the bees over the honey-dearth, which we always have for the next two weeks after the bloom from this source is gone. But I was doomed to disappointment; for with the opening of the blossoms came on a cold rain which lasted all through this bloom, with the exception of one-half of a day. I now had to resort to feeding to keep all my weaker colonies and nuclei alive, which feeding I kept up for nearly four weeks. Locust opened about June 12, when the bees got for a day and a half the most honey they had gathered so far; but with the afternoon of the second day, clouds and a cold wind arose, followed by rain which lasted until the bloom was past. After this we had splendid honey-weather till July 6; but as our fields are kept constantly under the plow, we have little white clover save along the sides of the road. From this, and the little raspberry and sumac bloom, the bees got a living, while a few of the stronger colonies stored a few pounds in the combs.

On July 6 it came off cold, with disagreeable, cloudy and windy weather which lasted for over a month, with the exception of now and then a day when the sun would shine a part or all of the day. Basswood, which gives our main honey-crop, opened on July 14, but it was of no use to the bees for a whole week, for they could not get to it on account of the wind, clouds and cold; besides, in such weather, honey does not secrete to any amount. At the end of a week one good day came, and the bees rushed for the basswood as if they were crazy; but with the next day the cold and clouds came again, when four days more passed with the beeyard nearly as still as winter. At this time we had another day of honey, with one-half of a day more, after another cool day. Then the cold and clouds kept the bees at home during all the rest of the bloom, except as they got a chance to go out an hour or so occasionally when the sun

would light out a little through the clouds.

After the basswood bloom was over, a little honey was secured from teasel during the next ten days when the weather would allow the bees to fly, after which no more honey was secured, although the month of August (after the 10th) and the first half of September were very warm; the absence of fall flowers and but very little buckwheat accounting for it.

Thus ended the poorest honey-season since 1869—the poorness of which was caused by bad weather during the bloom of all our honey-producing flora. As a result I have taken only 711 pounds of honey—272 pounds being extracted, and 439 pounds comb. This gives an average of 27½ pounds for each of those set apart for honey, in the spring; and considering the few days in which they could work, they secured more than I could reasonably expect. I shall put in winter quarters 55 full colonies and about 20 small ones which will be made up by uniting nuclei. Most of the full colonies have nearly enough honey to winter them, but the united nuclei will have to be fed.

I have received nearly \$500 for queens and bees, while the comb honey at 15 cents, and the extracted at 10 cents per pound amounts to \$93, thus giving \$593 the gross amount received from my apiary. From this I have to deduct about \$63 for the sugar which was fed, which leaves \$530 as my pay for the labor expended on the bees. By dividing \$530 by 40, the number of colonies, spring count, it will be seen that I received an average of \$13.25 each, as a cash profit; which is not a bad showing. However, had it not been for the queen-rearing part of it, I could well say that bee-keeping for 1884 has been nearly an entire failure.

Borodino, N. Y.

For the American Bee Journal.

Wintering Bees.

A. H. DUTTON.

One who is but slightly acquainted with practical bee-keeping might suppose that the above subject, if he were to glance over the past numbers of the BEE JOURNAL, was an apian topic stale, dry as dust, and threadbare to the point of general dissolution. This *a priori* notion, however, is a mistake, and that for two reasons: 1. Perfect certainty in wintering is a thing yet unattained by our oldest and most scientific apiarists. 2. New men are continually entering the field eager for the latest information concerning this, one of the most vital matters in connection with the bee-business. Hence, we shall give a general recapitulation of the subject up to its latest developments, and if any hint may be dropped to those who are veterans in the ranks, or guidance to those who are just enlisting, I shall feel repaid for my trouble.

In the problem of wintering, failure springs from the violation of natural

laws in connection, either with food, heat, ventilation, moisture or physical characteristics. These cover the whole ground; and whilst one apiarist contends for one of these points, and another for some other one, and each seems to think that if the popular misapprehension in regard to the special phase of the point which he views as the seat of the difficulty, could be removed, unsuccessful wintering would be a thing that was. Whilst this is the case, the fact remains the same, that the points which I have enumerated embrace the whole field wherein the controversy lies, and which, without a shade of doubt, holds in the rectification of the popular practice in respect to one or more of these things, the solution of the problem.

Having thus defined in a general manner the ground where the danger lies, I am not going to make the claim that I can lay my finger on it and say, "Here it is," nor be so egotistical as to pretend to turn this article into a bullet of deadly aim, and lay it low at one shot. My powers of observation must be further cultivated, and my experience more extended before I could presume to make this attempt; but as one who recognizes the field wherein "the lion's den" must be located, I shall throw out some cautionary signals, or to employ another figure, by firing a "broadside" at the enemy, slay him by quantity, if not necessarily by correctness of aim.

Before laying out my methods, however, to more thoroughly clear the way, let us inquire: first, "What are the native instincts of the bee regarding the change from summer to winter?" second, "How far is it within the domain of human reason to interfere with these instincts beneficially?" In respect to the first, it is a rare thing in the state of nature to hear of a colony of bees being winter-killed. How many of us have heard of such a thing? In 99 cases out of 100, where do we see bees winter-killed when they are located in their untrammelled condition of nature—a hollow within the trunk or limb of some tree at a distance from the ground? So much for situation. Let us examine the internal economy of the house, and what do we find? We find the honey above the cluster principally, and everything overhead as air-tight and snug as propolis and wax can make it. No upward ventilation in nature; this is a rule with scarcely an exception. Below the combs and cluster is a large air-space or column of dead air, and by means of this the ventilation of the hive is secured; and with what success, observation has revealed to us. These then are the conditions under which the bee exists when left to follow its own inclinations, and we see them carried out, as far as circumstances will admit, in every box-hive and "log-gum" in the land, and with the degree of success following which their restricted quarters entail.

The foregoing, then, is what observation teaches us concerning the instincts which impel the bee to carry out "the first law of nature" in its

preservation during the winter season. Now, let us ask, who is the author of these instincts? and is it placed within the province of man to interfere with them, with benefit to himself? In other words, are these instincts of the bee insufficient to secure its own highest well-being in the economy of nature, apart from human aid? Let it be understood that when we speak of instincts, that we mean what we say, and have no reference whatever to those slight changes in form, size, color, activity, etc., which may be produced by crossing two varieties of bees, or building up and perpetuating some freak of nature. For instance, such as we see in the so-called Albino bee, which, as Prof. Cook truly says, may frequently be found in our ordinary Italian colonies. These variations from nature constitute what Agassiz classes in his Natural History, as "breeds."

But I refer to none of these things, but exclusively to those cardinal principles which are implanted by God in the nature of the bee, which constitute its characteristics, make it what it is, and which no amount of scheming or contriving by man can destroy. What, then, is the very first of these principles or laws of its being? Is it not the same as that which hold the like position over the whole range of animated nature; viz: its self-preservation? Then is it within the power of the human mind to improve upon this grand, impelling motive of its being—a motive which leads it to "provide its meat in the summer," and to give itself no upper ventilation for the winter? Yes, it is within man's power when he also has reason to think that his ingenuity could teach the bee to gather clay for pollen, water for honey, or place its stores beneath the brood instead of above, or the drones to spend their energies in honey-storing instead of using them in the fertilization of the queen. Yes, when he seriously imagines that he can improve upon these other instincts of bee-nature, then will he also have license to think that he can improve upon their wintering-instincts as well.

However, to those who prefer to view the case in a different light, and are willing to fall in line with the wisdom of God, and shape their plans and activities to best promote the full execution of the principles which He has established in the economy of the bee, (and I profess to be among the number), to those I would say, let us so endeavor to enlarge our powers of observation, and increase our faith in the doctrine that the mental characteristics of the bee are as completely defined in their way as its physical; as to so regulate our manipulation in the apiary, as to best promote the fullest development of those divinely-furnished attributes, which, so far as concerns its own preservation, is as much shared by the bee as the head of creation—man.

Hence, we conclude first, that the instincts of the bee in its own preservation, are definite qualities given it by its Maker to secure this end, and are best fitted to do so; and second,

that these instincts have a defined territory which is beyond the province of human reason to invade with benefit to man, and that inasmuch as it does so, injury to the bee is sustained, and loss to its owner results.

Then with these foundation-principles before us, we shall come to the question in hand, and on account of my favorite method of wintering, being on the summer stands, I shall treat the matter from this standpoint; but the principles which may be elucidated are equally applicable to every other style of wintering, although we leave it to others to do so.

Now, as we have before remarked, failure in wintering infallibly proceeds from incorrect practice in connection with one or more of the five points already alluded to. We shall enumerate them once more, and then after giving our system of fall preparation of the colony for wintering, shall deal with each in detail: Food, heat, ventilation, moisture, and physical characteristics.

As regards the fall preparation of the colony for wintering, much has been said concerning stimulative-feeding; some would have brood-rearing in full blast until the middle of October, and to this end often feed from 6 to 8 pounds of syrup to each colony during the fall. We believe this to be mistaken economy, for three reasons: 1. Because a good, prolific queen (and the apiarist should tolerate no other), and one not too old, will, under any circumstances, providing there is a good supply of honey in the hive, keep on breeding during the fall quite sufficiently to give a good force of young stock for winter, and thus the trouble of feeding is saved. 2. Unnecessary expense is entailed both during and after the stimulative-process; for the money for the syrup is gone, or all that represents it are colonies boiling over with hungry consumers. 3. Such is not the practice of a large part of our most successful apiarists of the day; and what they can dispense with and yet succeed so well, giving reports every whit as large as those who practice it, I should certainly not recommend; but this advice, however, only applies in those cases where the colony has had a proper queen during the honey-season, and when a good supply of brood in all stages was in the hive when the season closed. Now, as this begins to hatch out, contract the brood-chamber, if a large hive is employed (my own takes 18 frames 14 $\frac{1}{2}$ x11 $\frac{1}{4}$), by removing the empty frames and placing them outside the division-boards. This causes the remaining frames to be better covered with bees, and so less danger of the brood becoming chilled; and at the same time, on account of what little pollen and honey that may be gathered, being stored in less compass in the hive, the queen, in our opinion, is stimulated to lay longer and more largely than otherwise.

When the time has come to finally prepare the colonies for wintering, the first precaution to be taken, is in respect to the first point in my category.

FOOD.

This must answer to two demands: First, healthfulness; second, sufficiency. To secure the first, if the colonies are to be wintered on honey, save 3 or 4 well-filled and sealed combs from the basswood or clover harvest, from each colony in the apiary, or if in number of pounds, we shall suppose that 15 or 20 are held back. Now place the frames containing the honey in the centre of the brood-nest; outside of them again, at each end, place one of the ordinary frames of fall honey and a frame of pollen, the last to be on the outside of all; the colony will thus be crowded on 7 or 8 frames, and will have an abundance of good food, and sufficient pollen in the hive to enable it to start brood-rearing in the early spring. Thus every opportunity which they have in nature, to thrive, so far as food is concerned, will have been supplied them by the careful apiarist.

If one be desirous to feed principally syrup, remove 3 or 4 frames from the centre of the brood-nest, and in their place put the same number of frames of nice, straight, empty worker-combs; outside of these, at each end, leave a frame of honey and pollen as before. Now feed the colony 16 or 18 pounds of sugar syrup made from white or coffee A sugar (1 pound of sugar to $\frac{1}{2}$ pint of water). The feeder may be placed, after removing the frames outside the division-board, in the body of the hive, and the division-board slightly raised to permit the passage of the bees.

In furnishing syrup for winter stores it is advisable to feed it before the cold weather sets in, so as to give the bees an opportunity to seal the combs. The whole amount had better be fed in one or two installments. The reason we feed white honey or syrup, almost exclusively, to the bees for winter stores, and remove all of the pollen but that in two frames, is on account of deleterious substances which are often gathered by the bees in the fall after the regular honey-flow ceases, and which are apt to cause mischief if left in the hive. This bad food consists of the refuse from sugar and molasses barrels, juice of fruits, cider-mill refuse, honey-dew, etc. As regards pollen, Mr. James Heddon and others have pretty satisfactorily proven that too much of it is unadvisable for the same reason. Bees, like all other creatures, can only thrive on a proper supply of healthful food.

Our colonies are crowded on 7 or 8 frames in order to economize heat; and this brings us to the second subject on my list.

HEAT.

The hive which we employ, and which we believe cannot be excelled as a hive for wintering, has a double-walled brood-chamber with one inch of dead-air space between. This brood-chamber rests on a single-walled, enclosed stand, 14 inches deep, and this in turn (in winter) rests on the bottom-board. This stand has a variety of highly important uses

which we shall refer to under "ventilation," our next head.

Now, in preparing the colony for winter, we place against the two side-walls of the stand, on the inside, two boards, each 14x15 inches, with one-inch cleats nailed to each end, so that when they rest in position against the walls of the stand, a space of one inch will exist between the boards and walls of the stand. Between the boards at each end, we place division-boards, and cause them to come immediately under the division-boards at the ends of the brood-nest above. The space outside the division-boards, at each end of the hive, we next fill with chaff or forest leaves above and below; and then over all in the half-story above the brood-chamber, we place a 5-inch chaff-cushion. This completes our arrangements so far as the interior of the hive is concerned.

We now place against the outside of the brood-chamber and stand, on each side of the same, what we have chosen to call "winter covers." These are constructed of any kind of rough lumber, and extend the whole length of the stand and brood-chamber, and as high as to protect the whole of the sides of the latter. At each end of these covers are nailed cleats 4 inches deep, so that when the covers are placed in position against the hive, a 4-inch space will exist between them and the sides of the hive and stand. They are now secured firmly in place by a lath nailed to the cleats of the covers over each end of the hive, and the 4-inch space of either side is filled with chaff or forest leaves. Over the top of the "winter covers," from cleat to cleat, now place two strips of wood about 5 inches wide, so that when the rain falls on the cover of the hives it will not run into the chaff spaces on either side. The cover is now placed on the hive proper, and its edges made to lap over the strips of wood on top of the "winter covers." This completes our wintering preparations, and we believe that they are amply sufficient to safely carry the colony through the most rigid winter known to Ontario.

VENTILATION.

This and proper food, conjoined with a good queen, we regard as the grand centre of importance in wintering bees successfully. Much has been written on the merits of upper and lower ventilation, and with some, it still remains a vexed question. But after reading and comparing the reports of years past by, and with numbers of experiments with either method, I am forced to give my verdict in favor of lower ventilation; and even had we not so read and compared, we should advise this plan, simply on the ground that it is in accordance with the teachings of nature. Good ventilation is the great corrector of dampness in the hive, and the remover of foul gases, such as carbonic acid and nitrogen, which are exhaled from the cluster above, or sulphuretted hydrogen which may arise from dead bees below; besides which, it is the means whereby the bees are constantly supplied with

good, pure air for breathing. How important then is it that it should be duly attended to, and that its theory be thoroughly understood!

Air-currents take place according to fixed principles; viz: when any part of the atmosphere becomes heated it ascends, and the cooler air closing in on all sides, fills its place to undergo the same operation, if the source of heat continues. It will thus be seen that it acts in identically the same manner as does water in the process of boiling. In this case the heat being applied to the bottom of the vessel containing it, portions of the water become converted into steam, or is rarified, so to speak; and this being lighter than the water surrounding, it rushes upwards to the surface, whilst other portions of water less heated, take its place. Thus a current is established in the vessel, and continues to move so long as the water lasts.

Now, what is the source of heat in the bee-hive? It proceeds from exactly the same chemical process as we see exhibited when a fire is kindled in a stove, but merely without the attendant phenomena of light possessed by the latter. In the case of the combustion of wood, the oxygen of the atmosphere enters into combination with the carbon of the wood, forming carbonic-acid gas, and attended with the development of heat and light. In the case of our bees, the air finding its way into the tubes of their respiratory apparatus, part of its oxygen combines with the carbonized particles in the blood, with the formation of carbonic-acid gas, which, with the nitrogen of the air is exhaled, and being heavier than the surrounding air, falls to the bottom of the hive; and this chemical action carried on in the air-tubes of the bee, is accompanied with the exhibition of heat.

Now, as we employ the same cloth over our frames in winter (if it is untorn) as we made use of during the previous summer and fall, it will be seen that very shortly after our final fall-preparations of the colony for wintering are concluded, everything over the bees will be as air-tight as it is possible for propolis to make it. Taking this into consideration with the fact of a 5-inch chaff-cushion being placed over the cloth, it will be found that nearly the whole of the heat emanating from the cluster is confined in the hive. Ascending from the bees it reaches the cloth, and from thence is deflected downwards on all sides, and the cooler air from below being absorbed at the base and sides of the heated column, a circulation of air in the hive is established, which continues so long as the source of heat remains constant, or until the heat of the whole interior of the hive has become uniform with that momentarily given off by the cluster.

Knowing these facts, we recognize their importance if we desire at all times to maintain a circulation of good, pure air in the hive, to provide for a constant supply of cool air in the lower part of the same, and this we manage to secure in the following

manner: Two holes, each $2\frac{1}{4} \times 1\frac{1}{2}$ inches, are made in the lower edges of one of the sides of the stand, and two similar holes in the wall of the "winter cover" opposite. Wooden tunnels are now constructed to connect the holes in the stand and cover, and through the passages thus made, the cold air has access to the interior of the stand, and from it to the hive above. But, if the cold air only has access to the hive, and no outlet be made for the descending columns of heated air subcharged with the vapor of water, carbonic-acid gas, nitrogen gas, etc., one of our most valuable features in the proper ventilation of the house is lost; hence we construct another passage through the opposite walls of the stand and "winter cover," to that containing the others, and thus the ventilation of the hive is perfected. This last passage is placed at about 1 inch from the upper edge of the stand whereon rests the brood chamber, and in size it is $\frac{3}{8} \times 4$ inches.

The general utility of the enclosed stand for the brood-chamber will now be recognized by providing a large air-space beneath the cluster. The ventilation of the hive is far more effectively secured than if the entry and exit of air all took place through the ordinary passage for the bees at the base of the side-wall of the brood-chamber; and, further, by employing this stand and the ventilation it affords, we, at all times, have a concentration of heat in the upper part of the brood-chamber—keeping the honey warm, and everything dry and comfortable around the cluster; besides which, by elevating the brood-chamber to the height off the ground that it does, instead of being back-aching labor to handle the brood and extracting-frames, it is converted into a comparative pleasure. What apiarist is there with his 75 or 100 colonies in one-story, or one-story-and-a-half hives, that will not hail this as an advantage?

MOISTURE.

The fourth point has also had its strenuous advocates, as being the prime factor in unsuccessful wintering, but whether it is so or not, we leave it to others to demonstrate; however, of one thing we are certain, that unless its formation is understood and provided against, mischief will be the penalty of neglect. The moisture in a bee-hive in winter is generated exclusively by exhalation from the respiratory organs, and, possibly, the bodies of the bees, the air entering the lungs of the bees (or what answers thereto), becomes saturated with the vapor of the water continually evaporating from the pulmonary tissues. In this condition it is then thrown off, and unless removed by a proper ventilating current, condenses on the colder portions of the hive and combs, which, in the case of many hives not so well protected as my own system calls for, becomes converted into a hoar frost, or runs down and freezes into a solid mass on the bottom-board, and sealing up the entrance which furnishes

air to the cluster, thus smothering the bees; and further, by condensing on the combs, it often causes the honey which is in them to sour, and the bees feeding on this, disease is induced among them, and frequently, also, the combs become moldy and almost spoiled.

How, then, is this condition of things to be remedied? A well-protected hive like the one we advocate partially meets the question, and a thorough system of ventilation almost solves it; but to get rid of the remnants of the evil, place pieces of broken brick well dried, or still better, two or three lumps of quick-lime on the bottom-board under the stand, and this having a powerful affinity for water, will absorb any particles not carried off through the ventilator, thus the hive is left dry and healthy.

Just here we should like to notice one thing in connection with upward ventilation, and how frequently does it occur. The moisture in its passage through the chaff cushion is condensed in the same, and gradually increasing in quantity, forms at last a wet, soggy mass, immediately over the cluster, and exhaling at the same time a musty effluvia, thus, in our opinion, giving rise to the most favorable circumstances for the development of disease and death in the colony.

PHYSICAL CHARACTERISTICS

Under this caption, the fifth and last topic on our list, we shall notice briefly two things: 1. The hibernation of bees. 2. The duration of bee-life. To Mr. W. F. Clarke, undoubtedly, belongs the priority of having specially called the attention of beekeepers to the subject of hibernation of bees; but whether in reality it is a truth, in our opinion, remains yet to be proven. True, Mr. Clarke has struck some heavy blows, but the nail yet remains to be clinched. However, be the issue as it may, every bee-keeper knows that bees certainly do pass the winter in a condition very much resembling, if not altogether, that of hibernation; hence, it becomes the scientific and progressive apiarist to study well and supply all the conditions favoring this state of repose, and to remove everything obnoxious to it.

Bees live during the honey-season, from 30 to 45 days; but all bees hatched about the time basswood bloom closes, and after that time, will probably live from 8 to 9 months, their energies not being exhausted in the field, are spent, so to speak, in the prolonging of life. However, after the first out-door activities of spring are set in, these rapidly die out, and then, unless a good queen is present and is filling the frames with brood to take their place, "spring dwindling," as it is termed, is the inevitable result. To make sure that all is right in this respect, and that the bees have plenty of stores in the hive, examine all the colonies on some fine day as soon as possible after the snow has gone off the ground. Note the condition of each colony, and if any require aid, supply it immediately.

And now in conclusion we would observe that if the objection should be raised to the foregoing methods, that they involve a great deal of labor, and, hence, are not suited to the practical apiarist, to this we would make a threefold reply:

1. That in reality very little extra labor is entailed beyond any good method of wintering.

2. Nothing pays better than a careful preparation of the colonies, year after year, and hence the most practical apiarist will be the most careful.

3. If any one enters the bee-business under the delusion that it is all play, that he has only to sit down and watch the bees put money into his pocket, and is unprepared at certain seasons of the year to perform downright hard labor from daylight till dark, if he owns 75 or 100 colonies and expects to succeed therewith, then I say, the quicker he gives it up, the better it will be for his bank account and his peace of mind.

Brussels, Ont., Sept. 17, 1884.

For the American Bee Journal.

Lake Shore, N. Y., Convention.

Pursuant to a call by the President of the Lake Shore Bee-Keepers' Association, it met at Fredonia, N. Y., on Sept. 6, 1884. Mr. U. E. Dodge was elected temporary chairman, and Mr. J. A. Benedict, Secretary *pro tem*. Those present then engaged in the following discussion:

Mr. Case: I would like to inquire how to take care of my bees to secure the best results possible.

Mr. Davis: You can get more surplus honey from old than new colonies.

Mr. Wilcox: I think Mr. Case has done well if he has doubled the number of his colonies this year.

Mr. Dodge: There is a great difference in different kinds of bees. We cannot tell why Mr. Case did not get more honey. He did well, at least, as he has doubled the amount of his capital invested in profit therefrom, the present season. He ought to be satisfied. One hundred colonies would not be a bad investment if they cleared five dollars per colony. If I can get my bees through the winter safely, I can generally succeed well enough the remainder of the year. Last winter out of 139 colonies I lost only 4.

Mr. Davis: I have had colonies near each other that varied greatly in productiveness. From one colony I obtained 3 swarms and 12 boxes of honey, and the next colony, standing near, did nothing.

Mr. Hall: How did this prolific colony do the next season?

Mr. Davis: It did remarkably well. I divided one of my colonies and it produced 12 boxes of honey and the old colony did well also. I would like to know if it is good policy generally to divide bees?

Mr. Dodge: People differ on this question. If you wish honey, keep the old colony at work and let the division alone. But if you want bees, then divide the colony, etc.

Mr. Jaarda: Last fall I bought 3 colonies of bees, and put them into the cellar and they came out all right. In the spring I bought 2 more, and they were looking finely. The 3 bought in the fall stored nearly 100 lbs. of honey and did not swarm. The other two colonies swarmed and did not store much honey. My profit is out of bees that do not swarm. Only by perseverance can we succeed. If we can prevent our bees from swarming, then we can reach the acme of success in the honey business.

Mr. Case: I would like to ask, that if our main object is to get honey, how can we manage to get surplus of bees?

Mr. Gage: It is a well known fact that bees store more honey when not allowed to swarm. I would cut out all the old queen-cells but one, after the 7th day from the issue of the first swarm. When the swarm issues, the old queen goes with it. I cut out all but one so as to insure, if possible, better success in their future work. I have 50 colonies, and find it best to continue this course. In utilizing queens by this method I do not fail one time out of 50.

Mr. Davis: If you divide colonies they will not go to the woods.

Mr. Gage: You are not sure of that. When bees get the swarming fever, it is hard to break it up.

Mr. Hall: Do you think that this season is a favorable one?

Mr. Gage: I do not. While there is an abundance of clover, etc., it does not contain as much nectar as usual. The more closely we follow nature, the better we will succeed. I have had a prodigious yield from one colony alone.

Mr. Dodge: A colony that is divided does not go to work as readily as one that is not. It is considerable work to divide colonies. I cannot divide one usually in less than half an hour. If I had time I would divide more than I now do. It would save trouble. We must use tact and precaution if we expect to succeed. What about upper ventilation?

Mr. Wilcox: My bees, last winter, did not have upper ventilation and came out all right.

Mr. Dodge: My experience is that all this talk about ventilation is a waste of time. I do not think that it makes any difference about ventilation. My bees came through safely. I let in sufficient air from the bottom of the hive.

Mr. Fay: I have kept bees a lifetime. Last winter my bees had upper ventilation and I lost several colonies, but my son-in-law gave his bees nothing of the kind and he did not lose a colony.

Mr. Case: My opinion is that ventilation lets off the surplus animal heat.

Mr. Dodge: I do not believe that bees, of themselves, get very damp. But if they do, it is from some extra moisture that comes in from the outside of the hive. I find that bees kept in the cellar, gather moisture more rapidly than those outside. My bees that I wintered in the cellar were not ventilated at the top, or even very much any where.

Mr. Fay: My neighbor has an apiary that seldom freezes. It is near a hedge and is covered with snow nearly all winter.

Mr. Haven: I covered a hive over with straw and then with dirt, and the bees came through safely. This experiment shows conclusively that bees do not suffer so much from lack of ventilation as from lack of warmth.

Mr. Dodge: I would ask if there is danger from overstocking?

Mr. Gage: Not with honey, but with bees, perhaps.

Mr. Dodge: I believe that the opinion of overstocking is a delusion. Mr. Pond, of Mass., says that one acre of white clover will furnish 25 colonies with sufficient honey. We need not fear from overstocking. But in a poor season we are always overstocked. In a good season I would risk 1,000 colonies in my locality.

Mr. Fay: In my locality we must be overstocked, for out of 17 colonies I have only 3 lbs. of surplus honey. How is that for clover and goldenrod? My bees on foundation did no better this season than those without any.

Mr. Bolling: I do not think that this question can be exhausted. We express very much guess work in our different theories. The condition of the atmosphere has something to do with storing honey. Once I had one hive fill up with honey in five days, which had been entirely empty. This shows conclusively favorable in atmospheric conditions. They will not do well with the same number of flowers in some seasons as compared with others.

Mr. Dodge: If Mr. Bolling had owned 500 colonies, my opinion is that they would have worked in that special season with the same energy. We cannot expect, when there is no honey in the flowers, that we can get our hives filled. I affirm that we cannot overstock when the blossoms are full of honey.

Mr. Bolling: To have goldenrod yield honey plentifully, it must be warm weather. To-day, it is warm enough to suit the most fastidious bee or hornet.

Mr. Dodge: How and where to market our honey?

Mr. Bolling: That is a hard question. Honey to-day seems to be quite a drug in the market. People are suspicious. There has been too much adulteration by crafty dealers. We must have the "clear quill," and when they find us out we will have buyers enough. Our motto must be, "warranted pure."

Mr. Gage: By proper methods the trade can be worked up near home. Last season I had 960 lbs. of extracted honey and sold 900 lbs. of it at my own door.

Mr. Bolling: In seasons of great success in clover, goldenrod and heart's-ease blossoms, we will have a large surplus for distant markets; but ordinarily we can dispose of such goods at home. I do not imagine that our climate will allow us to be much overstocked.

The subject for the next meeting is "The best method for wintering bees."

Adjourned to meet at Brocton, in Moss Hall, on Saturday, Oct. 4, 1884, at 10 a. m. Good attendance requested.

J. A. BENEDICT, Sec. pro tem.

For the American Bee Journal.

Sexual Functions of Queens, Drones, and Worker Bees.

A. R. KOHNKE.

Having found, within the last year or so, articles by two or three different apiarists expressive of disbelief in "parthenogenesis," together with some reasons, which would apparently justify the same, I have considered the subject not a little. I may be pardoned for not attaching much importance or weight to the observations of the average American apiarist, because I know that if it is not a question of dollars and cents, the average American does not trouble himself much about new discoveries, the knowledge of which is apparently of no practical use to any body. For this reason it has seemed to me that observations to establish new discoveries were not thorough enough to accept them as proven facts.

Let us consider proven facts first: The queen is the female bee, the drone the male bee, and the worker is a stunted female bee. To produce the worker, the queen must mate, or be fertilized; if she does not, the eggs, which she may lay hatch drones. It has been proven by microscopical investigations made by Professors Siebold and Leuckart, and Rev. Schoenfeld, that eggs laid in worker-comb, by a queen mated in the regular way, contained from two to five of the seminal filaments. These eggs were examined as soon as deposited, and the sperm-cells or seminal filaments were always found within the eggs and not on the outside. Enough eggs have been examined to establish this as a fact. Consequently, to assume that the workers change the sex of the egg, on the supposition that the sperm filaments adhere to the outside of the egg from which they may be easily removed, is contradictory to perfectly reliable authority, which have verified the opposite by ocular demonstration.

The same scientists have also proven by ocular demonstration that freshly-deposited eggs laid by a mated queen, in drone-cells, or those laid by a queen not having mated, as also those laid by workers, are devoid of these sperm filaments. Now, as one and the same fertilized queen has been used by these scientists to obtain both kinds of eggs which she deposited while being watched in an observatory hive, I think that we are justified in believing that such exact work by such close observers and investigators precludes all chances of error, as far as their investigations extended, which was to demonstrate the true sexual relation of queen, drone, and worker, and to show why eggs laid by the same queen should hatch workers or drones.

As a natural consequence, it has been assumed that it is voluntary with the queen to either impregnate the eggs that she deposits, or not.

This assumption is supported by the observations above stated, but does not, of course, admit of ocular demonstration. Well, this much we know of queen and drone. The workers, on account of their number, have escaped individual observation. Those which were dissected proved sufficiently, that they are stunted females.

The next problem was to discover what caused their being stunted. It has been found that it is the difference in food which has the effect to more or less develop the individual bee, and produce either a worker, on a diet of honey and pollen, or a queen, on a diet consisting of the secretion of the salivary glands situated in the heads of the young worker bees; this secretion is what is known as royal jelly. I may also remark here, that in old bees these glands dwindle or shrivel to such an extent that secretion is entirely suspended; this makes it apparent why mainly young bees should be employed to rear queens, and then the same bees not more than once, as their salivary glands, once exhausted, cannot resume their function afterwards; hence they are not fit, because unable to rear a good queen. But even if they can not or do not rear a queen, the desire to preserve their existence as a colony, is generally present, in consequence of which one or more workers begin to lay eggs.

It has been and still is a puzzle to the apiarist, how workers are fitted to assume the royal duty of depositing eggs. Many bee-keepers do not believe it, giving as a reason that they have not seen it; still it is a fact that they do lay eggs, but these eggs always hatch drones. To entertain the idea that such a worker could or would be fertilized by a drone was considered so far from the probable that no bee-keeper ever mentioned it as possible.

But a bee-keeper, by the name of Kremer, in Germany, has made a remarkable discovery. He caught a worker and drone in the act of mating. When so caught, they were still connected by their sexual organs, and thus sent to Rev. Schoenfeld, who, at present, is the keeper of the large microscope bought by the bee-keepers of Germany. After an examination of them, he pronounced the worker to be not more nor less than any other worker-bee; a real, genuine worker it was, and not a stunted queen as was at first believed; nor were the sexual organs of this worker any more developed than any of the others which he had examined.

This discovery caused a great sensation among apiarists in Germany, as well it might. A writer in the *Illustrated Bienenzeitung* asks some questions which he partly answers, maintaining that the queen never lays any eggs which hatch drones, but that it is the business of the fertilized worker. Where that drone comes from, to do the first fertilizing in the spring, he does not say. The following is a translation of the main points and answers which he submits: "1. May a worker be fertilized? According to Kremer's discovery and the

investigation of the bees by Rev. Schoenfeld, the question must be answered in the affirmative. 2. Had the worker, in question, a desire to mate? Certainly; otherwise the act would not have taken place, for a worker possesses the means to repel a drone in case the latter should want to enforce copulation. The observed fact is also proof conclusive that the stunted or smaller sexual organs of the workers admit of copulation. Microscopical investigation proved, also, that no part of the sexual organs of the said worker had been in any way injured or torn. Experience also proves that in a colony some workers are larger than others, and some drones are smaller than the average. 3. May such workers, in mating, become fertilized? Certainly; nature does nothing without an object. The object of mating is to fertilize. 4. Have laying workers been observed? Experience says, Yes; especially in a queenless colony. 5. What did such eggs hatch? Only male bees or drones."

The other points are of minor importance, in one of which he asserts that it has not been proven that queens ever lay eggs which hatch drones, which is contrary to facts; and he winds up by saying, "A queen which is fertilized lays such eggs only, which hatch either perfect or stunted female bees, according to the food with which the larvæ are supplied. The less stunted and fertilized workers lay the eggs which hatch perfect male bees or drones."

Youngstown, Ohio.

For the American Bee Journal.

The Ontario Convention.

Many kind references on this occasion were made to the large gathering of a year ago, when our city was honored by the presence of the many great bee-men brought together at the meeting of the North American Bee-Keepers' Association. We held our annual meeting during the time of the Industrial Exhibition, at which, too, the honey exhibits formed no unimportant part. The present increased interest manifested in bee-culture, as compared with only a few years past, is truly astonishing. Three evening sessions of nearly four hours each, and two forenoon meetings were all attended by many who, for the first time in their lives, had been present at such a meeting; and being invited to ask questions, they afforded no small amount of amusement as well as displaying intense anxiety in their efforts to master the mysteries of the bee-hive.

The themes and questions discussed covered most of the ground which is generally gone over, and the common conflict of theories had ample development. The answers as to methods and uses of ventilation were so flatly conflicting as to sadly bewilder the solicitous inquirers, and sometimes looked more like thickening the darkness than evolving any light. "Shall we clip the queens' wings?" "Yes!" "No!" "Which is the better for bee-forage, a new section of country

or an old, well-cleared and cultivated one?" "New!" "Old!"

"Which is the best race of bees?" "Survival of the fittest," "Tree-top conditions," "Foul brood," "Preventing spring dwindling," "Fall feeding," "Shape of frames," "Swarming, and bacteria theories," none of them seemed to lack freshness of live treatment. Upon the whole, perhaps the special good-nature evidenced amid so spirited a discussion may have been somewhat promoted by lingering recollections of how hardly and good-naturedly big bee-men (here, a year ago), without mercy, hit each other's pet theories. In fact, the sort of enjoyment of the ease with which a good brother's "castles in the air" could be demolished, seemed to lend a charm to the exercises. Then, amongst all, the "toes" so rudely trod upon, so few seemed in the least tender.

Several of the number present wondered why we do not have these annual meetings oftener; as Pat Monahan wanted to have "quarterly meetings" held "monthly." Some of us suggested that Rochester, N. Y., is not so very far away, and a big meeting is to be held there in the near future. A number expressed a desire, nearly amounting to intention, to be there.

It is all very well to read articles on "hybrids" and all that, but for a real good time, some would say, give us a genuine, live International Bee-Keepers' Convention with a respectable sprinkling of lady members present; and absent all dry, long, well-written papers. To this should be added two or three, bee-paper editors, and one or two crank advocates of "Queen-larvæ fertilization in the cell." But then we, of course, require on hand, too, a few large producers of No. 1 comb honey, and a fair proportion of anxious-to-be-instructed novices. Then, ho, for next, nearest bee-keepers' convention! S.

Toronto, Can., Sept. 20, 1884.

For the American Bee Journal.

A Dark Picture.

J. M. HAMBAUGH.

A more promising season than that of the present year never dawned upon the enthusiastic apiarists in this region. Mother Earth seemed abundantly clothed with the tiny petals of white clover, and as the days increased in length and warmth, our hillsides and valleys were soon carpeted with living green. None were more enthusiastic than myself in the cause, and nothing was left undone to secure our portion of the nectar from white clover.

March 23 marks the first joyous impulse of the eager little bees, as they hovered over the opening buds of the soft maple. Living as I do at the western terminus of the sloping bottoms of the Illinois river, with the abrupt bluffs to the north and west heavily studded with timber, and basswood abundant, to the south and east a vast landscape of waste land

subject to overflow, gives me a vast and diversified range. The banks of the river, four miles distant, are skirted with timber of various kinds, and soft maple, willow and button-brush intervenes in hundreds of acres from there to tillable lands. It is in this direction that the attention of the honey-bee has been drawn during the entire season.

My surplus arrangements were all put on by May 10, and my bees were in prime condition to reap the clover harvest. How happy I was on May 19, when the first white petals began to show above the ground, and I prided myself of soon being in possession of the nectar suitable for the gods. The hillsides and the valleys became white, and my bees labored—but where? Not to hillsides and valleys, but to the bottom lands; and when my hives became burdened, I excavated some of the sections that were nicely sealed. We sampled one, and our verdict was similar to that of the Editor's, when he saw fit to term it "vile stuff," etc. Our brilliant anticipations were blasted, and we consoled ourselves with our brethren's and sister's experience—Mrs. Harrison for instance—for misery likes company, you know.

Basswood bloomed on June 28, and no benefits resulted therefrom. The unruly little laborers still preferred the regions of the honey-dew to that of the basswood bloom. I would like to know if this honey-dew is likely to stay with us from year to year; if so, we want recipes to manufacture vinegar at 75 cents per gallon, or hunt a new occupation.

It was, perhaps, the middle of July ere they ceased to carry in the "vile stuff," and their attention turned to a more legitimate channel, since which time the quality is much better, though the quantity not so great.

Our Spanish-needle harvest has been good, and the general condition of the bees on the bottom-lands was never better; but after one reaches the uplands, three miles back from the Illinois bottom, the situation is quite the reverse, and which is the dark picture mentioned in the heading of this article.

There has been no harvest for the bees during the entire season, save the white clover, and that yielded but a scant supply. During the balance of the long season they have remained inactive, and were compelled to draw on their own resources for sustenance. Demoralization from protracted idleness, or something else, has caused "spring dwindling," or something akin to it, till many which were strong colonies at the close of the clover harvest, at present can scarcely muster a queen's retinue. One man in Mt. Sterling, this State, with 75 or 80 colonies, thinks that but few of them will survive the winter.

The bees appear inactive when they attempt to fly, and fall to the ground; and after futile attempts to regain their wings, they crawl about and die. Dead bees are found over the sidewalks quite a distance from the hives. Feeding is the order of the day, where the colonies are sufficiently

strong to justify it, as what little they accumulated in the spring is about consumed. Has this occurred in other localities? and am I right in my conjectures as to the cause? I have examined the brood, and so far as I can see, it is in a healthy condition. The trouble seems general throughout the uplands.

Versailles, Ill.

For the American Bee Journal.

Comments on Several Subjects.

JOSEPH M. WISMER.

I beg to state that the BEE JOURNAL has been carefully perused, searching for the long-felt want, information, to enable me to substantiate my experiences in producing honey in its different forms. On page 215, Mr. Wm. H. Balch, in the second paragraph of his article, concludes that all animals have their peculiar scent, which exactly expresses my sentiments. I well remember, but a few years ago, a neighbor of mine had a small quantity of butter packed and ready for market. During the night the dog killed a skunk under the veranda of the house, just outside of the cellar; the following morning the butter, milk, and part of the eatables presented a greenish hue, and were unfit for use.

On page 485, Vol. XVIII, Mr. Heddon gives a good description of the effects of the odor of the honey-bee, when disturbed, has upon the body of man; and even when in the apiary, bees flying around within smelling distance, would create such a tinkling sensation in the head so as to produce asthma.

On page 567, present volume, is an article from Dr. Tinker, concerning poisonous honey. I do not wish to undermine the Doctor's practical profession, or to interfere with the Heddon-theory, but merely to present to the readers of the BEE JOURNAL my experience as a honey-producer. In my youthful days I could not eat honey without causing severe colicky pains. Being a lover of bees and honey, I could not abstain from the sweets which the bees had stored in their well-made cells.

For more than 20 years as a bee-keeper in the old-fashioned way, I have suffered from its effects, not knowing the reason why such a sweet as honey, so highly spoken of in the holy writ as wholesome food, should be poisonous, until I commenced keeping bees on the new or modern plan, and following the instructions of the BEE JOURNAL. I noticed that extracted honey, when eaten, would be more mild than comb honey in my stomach, thereby proving that honey ripened by the bees was where the cause existed. This extracted honey is impregnated with this same discharged poison as Mr. Heddon speaks of.

Observation induced me to make further investigation in this matter. On one morning in 1882, when clover and basswood honey was at its best, I extracted all the honey which 2 col-

onies had, and then in the evening, again, in order to get this vegetable sweet in its natural state and ripened by evaporation. This honey I found that I could eat with safety, and with pleasant sensations.

Not being satisfied with this experiment, I knew of three friends who used the same precautions as I had in eating honey. I persuaded them to eat of this prepared honey, and with the same results. So that led me to believe that honey ripened by the bees contained enough of the so-called poison to produce colic to some people, and, again, to others premature death. With this prepared honey I healed or cured my delicate or weak stomach so that I can with safety eat any kind of honey. In order to more fully substantiate these facts, I would ask the Doctor a question: Why does the sting of a bee produce greater pain with some people than with others?

On page 536, Mr. A. A. Fradenburg asks, "Can any bee-keeper who reads this, show that a single colony of bees has ever had diarrhoea when they have had no pollen at all?" which I cannot pass without relating a few facts in my own experimenting with bees to winter successfully. Last fall I prepared 20 colonies in four different ways, all equally in good condition; 5 colonies were in nature's own way; 5 with pure granulated sugar and without pollen; 5 with sugar and pollen; and the remainder with pollen, sugar and honey. I was very anxious to winter at least a part of my bees.

I found that they were doing well until Jan. 20, when the thermometer indicated 16° below zero, and the bees on the summer stands began to show uneasiness, and continued so until Jan. 22, when the mercury was 24° below zero, which was uncommonly cold for this locality. The colonies prepared with sugar and pollen were the first ones to spot their hives and die. On opening the hive to see their condition, I thought to myself, "There! pollen cannot always be the cause of bee-diarrhoea." For instance, Mr. F., on the same page, in the first paragraph, quotes this: "I (Heddon), this morning, received a letter from Mr. Shuck, and he suggests the idea that vegetable matter is the cause of the trouble, etc." The case that I had last winter goes to show that sugar or honey in their best forms, is vegetable matter as well as pollen, which I conscientiously believe will, in a certain condition, or in a low, wet temperature, produce diarrhoea in its worst form.

On page 556, Mr. S. J. Youngman writes: "Upon close inspection I saw that it was fine liquid spray or fine drops which was ejected from the bees." Nature has so constructed or devised the honey-bee as to have means to separate the water from the sweets contained in the nectar in its raw state, which I will try to explain. Four years ago last spring, I fed my bees in order to stimulate breeding, and I found that sweetened water fed outside of the hive, would induce the queen to lay with a good will. I also noticed a similar phenomenon as that

witnessed by Mr. Y. and his assistant.

Three following springs, when too cold for my bees to forage with safety, I would introduce sweetened water to keep them from the danger of dwindling. I found that around the feeder would be as wet as though it had been raining, which induced me to search for the cause. Hundreds of bees circulating through the air just above my head, and having been at the feeder, was what kept the air as though fine liquid spray or fine drops of water was falling, so long as the bees continued to feed and the air was perfectly clear.

On close inspection of the bees that worked with a good will, I found that they would fill themselves and take wing to eject the water accumulated, and then would again come down to the feeder to refill themselves with sweetened water before entering the hive. This process I believe to be a common feature in the bees in the foraging field. Mr. Y. further says: "Now, what does this mean? What bearing does it have on the dry feces theory? Also, on the pollen idea?" I emphatically say—*none*.

Jordan Station, Ont.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Rules for this Department.

1. Give your name and post-office address.
2. Be brief, and to the point.
3. Send no simple questions, such as are answered in the bee-books.
4. Ask only such questions as are of general interest.
5. This department is not intended for advertising any one's wares—therefore questions concerning the manufacture of goods for sale are not appropriate.
6. Direct all questions to the editor—

THOS. G. NEWMAN,

925 West Madison St., CHICAGO, ILL.

Brood-Cells.

How soon, after the young bee has emerged, will a cell be used again? or how many times may it be used during 4 months of the breeding season? F. F. G.

Waterville, Me.

ANSWER.—I think almost immediately, so that each cell will sustain the production of a worker-bee every 21 days, drones 24 days and queens 16 days. This is the average length of time with but slight variation.

Will Bees Produce Dampness?

Will putting bees into the cellar cause dampness to such an extent that vegetables and other things will be injured? I have 30 colonies of bees in the vicinity of Troy, and I wish to place them in the cellar where they have been kept; but before I am permitted to do so, the gentleman desires to know, from good authority, whether they will produce dampness or not. I have taken from three bee-

yards about 5,000 pounds of honey, which I consider only half a crop. Two thousand pounds of it was comb, and 3,000 pounds of extracted honey. A large portion of it is of a very fine quality. Our bee-papers speak of honey-dew, but there is none of it here.

G. H. ADAMS.

North Nassau, N. Y., Sept. 16, 1884.

ANSWER.—I have wintered my bees (some 30 to 60 colonies) in our house cellar several times, and have never seen any damage done to the vegetables or anything else in the cellar. Neither do I remember of any report of any such damage from bees.

Absconding Swarm.

I hived a very large swarm of bees on June 3, and on June 10 they left for parts unknown. The hive was new and clean, and had Dadant's foundation in it. They filled the hive with honey before they left. Please explain the cause of their actions.

Plier, Wis.

HENRY STARK.

ANSWER.—No one has ever been able to account for many strange freaks of bees; especially such actions of swarms as the one which you mention. I have had a few swarms leave new, clean hives well supplied with choice foundation, and that, too, after they had made a good start therein, and lodge in a small (too small) rotten cavity of a tree where the rotten wood lets the combs drop as fast as they became heavy. The natural instinct of bees, in many instances like other insects, leads to failure and death.

Winter Stores for Bees.

1. Neighboring bee-keepers state in the last issue of the BEE JOURNAL that they have but half a crop. From 150 colonies, spring count, I have increased them to 200, and secured 9,000 pounds of comb honey in one and two-pound sections. What per cent. of full crop do you regard this?

2. Upon examination I find many colonies which are fully supplied with honey, without brood or eggs, yet having queens and plenty of room. Why is this? Would you at once begin to stimulate such colonies to brood-rearing?

3. I winter my bees in the cellar, and put into winter quarters from Nov. 1 to 15. Would you now supply colonies which have not sufficient stores for winter? or is it best to wait until a few days before placing them into winter quarters?

E. W. THOMPSON.

Hindsdale, N. Y.

ANSWERS.—1. Your yield is a good one, and though not as large as has been taken before from the same number of colonies, it is far above the average of the country.

2. I cannot account for such a condition of your brood-chambers, never having any such conditions here. During the honey-dearth, just after basswood, is when our bees breed the most. Can it be that your hives and field are both destitute of pollen?

3. I would feed the deficiency now, while the weather is warm.

SELECTIONS FROM OUR LETTER BOX

Only One-Third of a Crop.

The season here has been a poor one—only one-third of a crop of surplus honey, and but few swarms, but those were very large ones. The weather was too dry and too cold.

R. B. WOODWARD, M. D.

Somerset, O., Sept. 20, 1884.

Terrible Loss.

I have lately lost a good, comfortable house, worth \$2,000, by fire. In it I lost nearly all of last year's crop of honey, and hundreds of volumes of an excellent library.

WM. BALLANTINE.

Sago, Ohio, Sept. 17, 1884.

It Pays to Use Foundation.

The honey crop here is rather light this year. Some colonies have done well, while others have gathered but little honey. From 7 colonies I received 9 swarms, of which only two have gathered enough honey to winter on. Having seen Mr. Doolittle's question, "Does it pay to use comb foundation?" I thought I would try the experiment, so on June 17 I hived an Italian swarm of bees in a Langstroth hive containing 10 frames filled with comb foundation, and 64 one-pound boxes filled with foundation. In 7 days they had the 10 frames filled with honey, and were working in the surplus boxes. I have taken from that colony 70 one-pound boxes well filled with fine honey, while other swarms coming a week or two later have not honey enough to winter on. The cost of the comb foundation did not exceed \$1.75. To me it looks as though it pays to use comb foundation.

FRANK HATCH.

Lisle, Ill., Sept. 22, 1884.

Killed by a Bee-Sting.

On Sunday, Sept. 21, 1884, Mrs. Sturdevant, who lived in Fairfield, Fayette County, Iowa, while walking home from a neighbor's, where she and her husband had been visiting, was attacked by a honey-bee that got into her hair. Her husband killed it, and immediately she was attacked by another, which stung her 9-16 of an inch below the upper margin of the lower left eye-lid, and about 1/4 of an inch nearer the outer than the inner canthus of the eye. She was about 30 rods from her home when stung. She requested her husband to extract the stinger, when, upon examination, he could see the place where she was stung, but did not see the stinger. She immediately went home, and on going into the house, her daughter asked her what was the matter, when she replied that a bee had stung her. She asked her daughter for the camphor, and immediately went to her bed-room, and lying down upon the bed, her daughter then saturated

a cloth and applied it to the wound. She went into what appeared to be an apopleptic fit, no spasmodic jerking of the muscles, and in five minutes, this being about 15 minutes after she was stung, she was a corpse. To all appearances she had been a strong, healthy person. A good physician was sent for, but got there sometime after she died. The Doctor thinks that the bee-sting was the immediate cause of her death. B. F. LITTLE.
Brush Creek, Iowa, Sept. 22, 1884.

Short Honey Crop.

We have had a short crop of honey in this region. I began in the spring with 210 colonies and increased them to 390, apparently in good condition. My honey crop is 6,500 pounds, nearly all of it being comb honey.

J. F. SPAULDING.
Charles City, Iowa, Sept. 24, 1884.

Local Convention Directory.

1884. Time and place of Meeting.
- Oct. 2.—Whitesides, Ill., at Morrison, Ill. A. B. Kreider, Sec.
 - Oct. 2.—N. W. Ohio, at Defiance, Ohio. W. H. Ralston, Sec.
 - Oct. 3.—N. Ind. and S. Mich. at Goshen, Ind. F. L. Putt, M. D., Sec.
 - Oct. 4.—Progressive, at Bedford, O. J. R. Reed, Sec.
 - Oct. 4.—Marshall Co., Iowa, at Marshalltown, Ia. J. W. Sanders, Sec.
 - Oct. 4.—Wabash Co., at Wabash, Ind. Henry Cripe, Sec.
 - Oct. 8.—Central Illinois, at Bloomington, Ill. W. B. Lawrence, Sec.
 - Oct. 6, 7.—Northern Mich., at Alma, Mich. F. A. Palmer, Sec., McBride, Mich.
 - Oct. 15, 16.—Northwestern, at Chicago, Ill. W. Z. Hutchinson, Sec.
 - Oct. 22.—N. W. Ind., at Laporte, Ind. A. Fahnestock, Sec.
 - Oct. 28-30.—North American at Rochester, N. Y. Dr. C. C. Miller, Sec., Marengo, Ill.
 - Nov. 10.—Will County, Ill., at Beecher, Ill. Gustavus Kettering, Sec.
 - Nov. 25.—Western Mich., at Fremont, Mich. Geo. E. Hilton, Sec.
 - Dec. 3.—Southeastern Mich., at Adrian, Mich. A. M. Gander, Sec.
 - Dec. 10, 11.—Michigan State, at Lansing. H. D. Cutting, Sec., Clinton, Mich.
 - Dec. 12.—Northeastern Kansas, at Hlawatha, Kan.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

National Bee-Keepers' Association.

As has already been noticed, the next annual meeting of the North American Bee-Keepers' Association will be held in the city of Rochester, N. Y., Oct. 28, 29 and 30, 1884. Essays will be read as follows: "Wintering Bees," by W. F. Clarke, of Canada; "Nectar," by Prof. A. J. Cook, of Michigan; "Marketing Honey," by Thos. G. Newman, of Illinois; "Foul Brood," by D. A. Jones, of Canada. The committee has decided to use the balance of the time in discussing these and other questions of importance. Those who cannot be present, and have questions that they desire to have discussed or answered, will please send the same to the Secretary, Dr. C. C. Miller, of Marengo, Ill., or to Rochester, in care of the convention, on or before the first day of the meeting. Notice as to place of meeting will be given hereafter.

C. C. MILLER, Sec.
L. C. ROOT, Vice-Pres.

Convention at Chicago.

The Northwestern Bee-Keepers' Association will hold its fifth annual convention at Owsley's Hall, northwest corner of Robey and West Madison streets, Chicago, Ill., on Wednesday and Thursday, Oct. 15 and 16, commencing at 10 a. m. on Wednesday, and holding five sessions. Those who have attended one of these annual re-unions will need no urging to induce them to come again; those who have not, should remember that Father Langstroth characterized the last meeting as "representing the largest number of large, practical and successful honey-producers of any convention that he had ever visited." This meeting being held during the Inter-State Industrial Exposition, reduced railroad fares may be had on nearly all of the railroads. W. Z. HUTCHINSON, Sec.
C. C. MILLER, Pres.

The bee-keepers' association of Central Illinois will hold their quarterly meeting at Bloomington, Ill., on Wednesday, Oct. 8, 1884, at 10 a. m. W. B. LAWRENCE, Sec.

The Whiteside Bee-Keepers' Association will meet at Morrison, Ill., at 1 p. m., on Oct. 2, 1884. All bee-keepers are cordially invited. A. B. KREIDER, Sec.

The Wabash County Bee-Keepers' Association will hold its second meeting on Saturday, Oct. 4, at the Court House in Wabash, at 10 a. m. All bee-keepers are cordially invited to attend. Come one and all and bring your wife and children, and we will try and make it interesting for you. HENRY CRIPPE, Sec.
AARON SINGER, Pres.

The Cedar Valley Bee-Keepers' Association will hold its second annual meeting in Beckley's Hall, South Side, Waterloo, Iowa, on Oct. 1 and 2, 1884. Reduced rates over the different railroads. All interested are cordially invited to attend and make this one of the best meetings in the State. H. O. McELHANY, Sec.

The Northern Indiana and Southern Michigan Bee-Keepers' Association will hold its next session in Goshen, Ind., on Oct. 3, 1884, at 10 a. m. Important topics relating to the management of the apiary will be discussed. Considerable time will be devoted to answering questions from the query-box. Several distinguished apiarists are expected to be present. All persons interested in bee-culture are invited to attend. A large meeting is anticipated. F. L. PUTT, M. D., Sec.
A. BLUNT, Pres.

The Tuscarawas County Bee-Keepers' Association will hold its next meeting at the apiary of Geo. F. Williams, in New Philadelphia, O., on Thursday, Oct. 23, 1884. G. F. WILLIAMS, Sec.
A. A. FRADENBURG, Pres.

The Progressive Bee-Keepers' Association meets on the first Saturday in October, 1884, at Bedford, O. A general invitation is given. J. R. REED, Sec.

Special Notices.

The Bee Journal for 1885.

Premiums, \$25.00 in Cash.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following

CASH PREMIUMS FOR CLUBS.

\$10.00 for the largest club received at this office before Feb. 1, 1885 (either of the Weekly, Monthly, or both); one Weekly counts same as 4 Monthlies.

\$5.00 for the second largest; \$4.00 for the third; \$3.00 for the fourth; \$2.00 for the fifth; and \$1.00 for the sixth largest club.

All former offers of Premiums are now withdrawn.

The price of the Weekly BEE JOURNAL for 1885 is \$2.00 for one copy; \$3.80 for two copies (to the same or different post-offices); \$5.50 for three copies; \$7.20 for four copies; and for five or more copies, \$1.75 each.

We have decided to publish the Monthly BEE JOURNAL for next year of the same size and shape as the Weekly, (which contains about the same amount of reading matter as the present Monthly,) at 50 cents a year; two copies (to the same or different post-offices) for 90 cents; three copies for \$1.30; four copies for \$1.70; five copies for \$2.00; more than five copies for 40 cents each. The time has been extended on all portions of next year, which have been paid for at the rate of \$1.00.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

New Subscribers for the Monthly for 1885 will have all the numbers for 1884 free that are published after the subscriptions are received at this office.

TRIAL SUBSCRIBERS.—The Weekly BEE JOURNAL will be sent to any new subscriber in North America from now until the end of 1884 for 25 cents. This offer is intended to aid those who are getting up clubs at Fairs, Conventions, etc., and should add several thousand to our readers during the next month.

Convention Hand-Book.

It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

We have had some bound in Russia leather, with colored edges—price 60 cents.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or \$8 per 100.

 We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each

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THE VOLTAIC BELT CO., of Marshall, Mich., offer to send their celebrated ELECTRO-VOLTAIC BELT and other ELECTRIC APPLIANCES on trial for thirty days, to men (young or old) afflicted with nervous debility, loss of vitality and manhood, and all kindred troubles. Also for rheumatism, neuralgia, paralysis, and many other diseases. Complete restoration to health, vigor and manhood guaranteed. No risk is incurred, as thirty days trial is allowed. Write them at once for illustrated pamphlet free. 6D1y

Bee-Keepers' Badges at Fairs.

We have some ELEGANT RIBBON BADGES, having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

QUEENS BY RETURN MAIL.

I am now up with my orders, and can send choice queens by return mail. Send me your orders, and help me "out of the fire." 34D4t J. T. WILSON, Mortonsville, Ky.

Friends, if you are in any way interested in

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We will with pleasure send a sample copy of the Semi-Monthly **Gleanings in Bee-Culture**, with a descriptive price-list of the latest improvements in Hives, Honey Extractors, Comb Foundation, Section Honey Boxes, all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address written plainly, to

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NOTICE.—The business of manufacturing the Given Foundation Press will still be continued at Hoopeston by J. R. Caldwell, who has controlled it for the past 3 years in the interest of D. S. Given & Co. Address all orders to D. S. GIVEN & CO., Hoopeston, Illinois.

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A. J. COOK, Author and Publisher,
State Agricultural College, LANSING, MICH.
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1884. JOSEPH D. ENAS, 1884.

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ITALIAN QUEENS.

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Also, Syrian and Carniolan queens, mated with Italian drones. Untested queens of either race, \$1.00; tested queens of either race, \$2.00. Special rates on large orders. Circular free. Send postal for it. G. H. KNICKERBOCKER, 34Dtf PINE PLAINS, N. Y.

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of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

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HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the utmost importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only **TWENTY-FIVE CENTS**, and contains 28 pages, and is sent by mail, post-paid, on receipt of price. This is just the Book that every family should have.

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What to Eat,
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Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear,
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We have again increased our capacity for making the "BOSS" ONE-PIECE SECTION, and are now ready to fill orders on short notice. We would advise our customers, and especially **SUPPLY DEALERS**, to

ORDER EARLY,

And not Wait until the Rush Comes.

We will not manufacture Hives and Shipping Crates this season, as we have fixed over all our machinery for making the One-Piece Sections.

J. FORNCROOK & CO.,

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150 Colonies of ITALIAN BEES FOR SALE.

They are in Langstroth portico-hives, with standard L frames. All in first-class condition, with from 20 to 30 pounds of good honey for winter. The combs are all straight and all worker, and are built mostly on wired frames. In lots of 1 to 10 at \$4.50 each; 10 to 25 at \$4.25 each; 50 or more, at \$4.00 each.

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65 ENGRAVINGS**THE HORSE,**

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

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It makes the finest extra thin Foundation for comb honey. For Sale by

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Honey, Foundation, Hives, Sections, and all Apian Implements, send for Circular to

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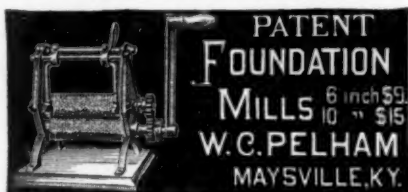
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37AB1Y

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PURE HOLY-LAND QUEENS.

Howard's importation of Holy-Land Queen are the only pure queens of this race in this country. We have 2 of the finest queens that Mr. H. imported, and will have by Sept. 15, 100 young queens from them. They will be fertilized 3 miles from all other bees, and we guarantee them to be equal in every respect to the imported queens. Price, \$2.00 each. A copy of the Bee-Keeper's Handy-Book or one of our combined Queen and Drone Traps will be given with each queen. We can send you as fine Italian or Albino queens as can be purchased in the world. Warranted queens, \$1.00 each; tested, \$1.50; select-tested, \$3.00 each.—Secure your breeding-queens for another season. 37A41 HENRY ALLEY, Wenham, Mass.

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We want an agent and local reporter in every community to represent City and Country, and furnish us from time to time such facts as we may require. Send 10 cents for credentials and full particulars regarding services and compensation. Address, Will C. Turner & Co., Publishers "City and Country," Columbus, Ohio. 24A18T

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Dear Madam:—We have made about 38,000 lbs. of foundation on your mills this year, and the foundation has given universal satisfaction; so much so, that several manufacturers have stopped manufacturing to supply their customers with our foundation. We have also manufactured about 10,000 lbs. of thin foundation on the Vandervort machine for surplus boxes, and it has been equally a success, but for brood chamber foundation, yours is still unexcelled.

Yours,

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Dear Madam:—I have made over 100,000 lbs. of foundation on one of your machines, and would not now take double the price I paid for it.

Yours very truly,

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D. A. JONES.

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All prefer the foundation I manufacture on one of your mills, to that made on any other machine I have no difficulty in rolling it from 10 to 12 feet to the pound for sections.

Yours respectfully,

Genoa, Cayuga Co., N. Y., Dec. 12, 1883.

J. G. WHITTEN.

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Yours, SMITH & SMITH.

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2BC1f

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Square Glass Honey Jars, Tin Buckets,
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GOLD for the working class. Send 10 cents for postage, and we will mail you free, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to \$5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send \$1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine. 4A1Y

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to be made into the best Given Foundation on shares, or at a low cash price per pound for making, during the less-hurried winter months.

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Owing to a decline in the price of Beeswax there will, hereafter, be a reduction of **5 cents per pound** on all orders for Comb Foundation.

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I pay \$5. per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

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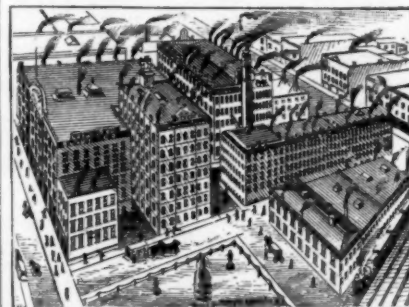
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For further information, send for Circular.

7A1y RICHMOND, Fort Bend Co. TEXAS.

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Send for Samples & Reduced Price-List. Attn J. VANDERVORT, Laceyville, Pa.

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